

DRAFT: 16 September 2021/lw s

(please add comments or initial above when you approve draft, Tony must get final revised draft by 9/15 to include in prep package for 9/20/21 mtg)

**NDCAP FEDERAL NUCLEAR WASTE POLICY
COMMITTEE ('the Committee') UPDATE FOR
20 SEPTEMBER 2021 FULL VERMONT NDCAP MEETING**

BACKGROUND ON COMMITTEE FORMATION, MISSION AND FUNCTIONING

VT NDCAP's Federal Nuclear Waste Policy Committee was created in December 2020 in order for the Panel to learn more about US national spent fuel storage and disposal issues and potentially develop recommendations on US nuclear waste policies of importance to Vermont for the full Panel to consider. Its creation was spurred by the change in federal policy supporting Consolidated Interim Spent Fuel Storage Facilities (CISFs) in a 2015 letter signed by the NDCAP former chair on behalf of the panel. The Panel approved a motion (8-1 vote with 4 abstentions) to withdraw that support and state that it currently has no position on CISFs or any changes to current US nuclear waste law. A 12 to 1 vote followed to create a Federal Nuclear Waste Policy Committee to learn more about national spent fuel storage and disposal concerns. Lissa Weinmann agreed to Chair the committee acknowledging the complexity of the topic.

Current committee members are Maddy Arms, Corey Daniels, Marvin Resnikoff, Anthony Leshinskie, who as State Nuclear Engineer administers the Committee and Weinmann. Other NDCAP panel members have attended from time to time and Chair Emily Davis keeps informed and attends as able.

The committee has met monthly since January, 2021 generally the third Monday of each month. A strict one hour timeframe is respected. Much reading is necessary. Anthony Leshinskie and Michele LaPerle of the Vermont Public Service Department have created and manage a Committee page on the NDCAP site with reading materials submitted by Committee members and the public. They also field public comments from the PSD-NDCAP@vermont.gov email. The Committee webpage is available at:
<https://publicservice.vermont.gov/content/vt-ndcap-federal-nuclear-waste-policy>.

PUBLIC PARTICIPATION

Committee meetings are warned a week in advance for Microsoft teams, and as of July 2021 open meeting requirements require physical meeting locations so we've convened at 118 Elliot at 118 Elliot Street in Brattleboro, donated by Committee member Weinmann (after PSD legal approval).

The Committee's work has attracted some national attention including federal entities, industry watchers and advocates from other nuclear host communities. Representatives from the organizations listed in Appendix A have joined at least one of the Committee's meetings conducted during 2021.

Below is a brief rundown of topics explored and guests received followed by developments on this issue during this year so far, questions that need more exploration and an overview of potential Panel Advisory Opinions could be

OVERVIEW OF TOPICS AND GUESTS

One of our first questions was whether the state already had a functional 'position' or policy on nuclear waste disposal matters apart from the 2015 letter. We learned the Department of Public Service and PUC were listed (and paying?) members of the national Nuclear Waste Strategy Coalition which used to be headed by Sarah Hoffman a VT (Commissioner of Public Utilities ck title). PSD Commissioner June Tierney said the Dept's membership would be rescinded now that Hoffman was no longer leading that effort.

We also investigated our federal delegations stance on CISF and nuclear waste policy in general, reviewing legislation and getting updates from staff. We have done extensive outreach to Hoffman who had agreed to address the committee but has not yet solidified a date. We also reached out directly to Scott State and Waste Control Specialists (WCS) to explain that companies' plans and perspectives on why Orano's (French US subsidiary is the applicant for the NRC license) CISF facility in Texas which WCS owns the land underneath is in Vermont and the country's interest but were declined.

Here are brief recaps of the guests and discussions we've had so far:

January 20, 2021: First meeting focused on administrative and procedural questions, but included a discussion of whether Committee members had an existing position and what they seek to get out of the panel, here's a sampling of input from that discussion:

- Citizen Appointee and Local State Representative for Vernon Sara Coffey (who later left committee due to time constraints) wanted to understand the layers of responsibility and where the financial responsibilities lie in regards to VY's spent fuel as well as more info on how the Site may shrink and how development can occur alongside an ISFSI.
- Corey Daniels, 24 year VY veteran and senior manager of the ISFSI at Northstar explained that he has no direct insights into how Northstar's sister corporation, Waste Control Specialists in Texas -- where all lower level VY waste has been going and where WCS has applied for an NRC license to open a CISF (consolidated interim storage

facility) near the current facility for high level nuclear waste. Corey holds that the federal government is in breach of contract and supports the Blue Ribbon Commission findings that a Central Interim Storage Facility should be explored as a potential 'interim' solution. He would like to see a geologic facility where radioactive spent fuel can be retrieved and reprocessed, would like to see the canisters leave the VT site and the area redeveloped as per the 'original deal' but feels NIMBY will likely make it impossible to site waste anywhere. Corey offered good reading material, urged the Committee to remain focused on facts and seek a 'success path' rather than just being against proposals, which won't get us anywhere.

- Maddy Arms of Vernon said she felt reasonably assured the waste is monitored and in a safe place. She said the Vernon select board, the planning commission and townspeople in general feel safe and believe the ISFSI is being well maintained for now. She said are resigned to the ISFSI remaining here for a long time and that any stipulation for redevelopment includes the site remaining a waste repository. She said the federal government has dropped the ball, that it has the resources but not the will to tackle this hard stuff. She hopes that technology may eventually offer a way to further use the spent fuel and end up with less of it.
- Marvin Resnikoff, who has worked as a consultant to the state of Nevada, strongly held that Nevada is a bad 'permanent repository' and that other sites must be explored starting now. He also expressed his opinion that all stakeholders - local, state and federal - must talk to each other to find consensus and often reminds of how Vermont would react if it were deemed appropriate as a federal site for deep geologic disposal of radioactive waste.

February 22, 2021: Further discussion of mission and suggested future speakers and process of submitting reading material to committee for its webpage. Arms expressing opinion that federal gov should support community's role in caring for the waste it has refused to take away. Leshinskie recommended we get speaker from tribal government, possibly the Waste Isolation Pilot Project (WIPP) on these issues. Resnikoff suggested NM oil and gas stakeholders be invited to share their opinions on CISF.

March 15, 2021: Ian Zabarte, 'principal man' of the Western Band of the Shoshone Nation, appointed in 2018 to the NRC's Yuccalicensing review panel, called in from Las Vegas to share the native nation's strong views against the use of Yucca Mountain as 'unconsitutional and illegal.' Tribal rights to the land the 1863 Ruby Valley Treaty and acts establishing the state of Nevada. He also pointed to the #4 NRC safety evaluation report which underscores that DOE has not demonstrated ownership of the land. Zabarte described how the [Native Commuity Action Council](#) actively organizes to oppose Yucca and what they view as nuclear energy's marriage with nuclear weapons development and will not stop.

Further discussion of how to approach the policy problem if intention is to have NDCAP and potentially the state to weigh in on the future of VY spent fuel, Weinmann suggested focus of the Committee's study be centered on whether or not CISF is in Vermont's interest. Reported on former PUC Commissioner, and former Chair of the Nuclear Strategy Coalition (of which PUC and DPS were members) that the state, despite these entities membership in that political coalition, has no policy on nuclear waste. Daniels expressed that companies like WCS/Orano may not want to participate in committee discussions because they may feel that opinions are against the facility.

April 19, 2021: Discussed **Doris Matsui (D, CA)** reintroduction of H.R. 2097, the Storage and Transportation of Residual and Excess (STORE) Nuclear Fuel Act. This bill creates a legislative framework to develop a consolidated interim storage program at the Department of Energy. It allows for both active and decommissioned nuclear power plants, with priority given to decommissioned plants, to move spent nuclear fuel to interim storage facilities. This legislation is driven by the need to move the exposed oceanfront casks near the San Onofre closed nuclear plant.

May 17, 2021: Mark Holt, nuclear energy analyst from Congressional Research Service, the federal agency that is the research arm of the Congress, presented and took questions. He reminded us that 10 years have passed with no new funding for Yucca and that this lack of appropriation to finish the process, by both Rs and Ds, has effectively arrested it. He pointed out that Obama's Blue Ribbon Commission proposed 'consent based siting' (and Yucca has no consent) but did not recommend changing current law designating Yucca, so sidestepped the issue. The NRC issued all the reports, gave Yucca the go-ahead, but funding for the adjudication of the atomic licensing board was cut off.

Holt shed light on issues around privately owned and funded CISFs being potentially outside of the statutory requirements of the law which back in the 80s only foresaw a federal site. NRC licensed PFS in Utah in 2006 as the first potential CISF site, but state did not issue permits and PFS terminated its license in 2012. Interim Storage Partners (ICS), WCS and Orano USA (a French subsidiary formerly AREVA) applied to NRC for a facility near current WCS operation in Andrews County TX near NM border, but it is also roundly opposed. (*Note: State passed law in Sept. 2021 outlawing any SNF facility*). Holtec in Eddy Lea County in NM is also seeking license but is opposed locally. There the NM Gov is suing NRC. Holt said there is a legal question about whether DOE could contract with a private facility to satisfy its obligation to take waste or would it become a defacto 'monitored retrievable storage'. He speculated that the private facility could take waste the waste without DOE involvement and fund the work not from Nuclear Waste Fund but from the the Judgment Fund which pays all judgments against the

US, not just nuclear, and is not appropriated by Congress. Holt said the main obstacle to movement on siting a repository of any kind, interim or permanent, is the federal system of the US -- states will not support. He said the NM Waste Isolation Pilot Project, meant to showcase a working deep geologic repository but for a limited amount of a specific variety of defense waste (WIPP) was built, after a lot of controversy, with state approval. He said, aside from WIPP, in no case has a state opposition been successfully overcome. Localities are sometime interested but then the state overall blocked it.

Holt said the NRC ruling that continued storage is safe at original host sites has diminished potential public outcry, but that it is possible that as plants shut down public pressure and congressional interest will increase.

He spoke about a new NY law that allows local taxation of ISFSI / SNF. This could help localities, could alleviate pressure for waste to be taken away. The NY State legislature gave localities the authority to do it.

He said new DOE head Jennifer Granholm said consent based siting process could revive and the Nuclear Waste Technical Review Board supports creating a consolidated responsibility for waste management nationally, and so did the BRC, although as independent from DOE.

He said FY 2021 DOE was funded \$20 million for the Nuclear Waste Disposal account, marking the first time since 2010 that account has been revived for integrated waste management all the consent based transportation etc used to prepare to restart a consent based process. There were also funds for advanced reactor research admin which is significant because maybe reprocessing and recycling can create a different type of waste that can be used. He said there is lots of interest in advanced reactors as a potential waste solution.

He said for the most part bills dealing with nuclear waste are introduced and reintroduced year after year with no real movement. He said the Energy Act of 2020 in section Z reauthorized more nuclear energy programs, including for small modular reactors, used nuclear fuel research, CISF with specific authorizations for several years.

He discussed a nuclear industry led letter calling for a new agency within DOE on nuclear waste. He said an Office of Civilian Nuclear Waste Management still exists, but its statutory responsibilities were folded into DOE, but that it is seen as a Yucca Mountain focused entity, so unlikely it would be revived. The new office is an idea that is in play but so far there have been no bills to reorganize the waste structure. A reorganization would put more attention on the problem he thinks, but what is ultimately appropriated will tell us how much attention the administration will pay to this issue.

Mark responded to questions about what exactly is consent based siting: is it local, state, native tribe? Does consent last forever? Can change of administration over time revoke consent? Is it an inviolable contract? One must have consent thru whole process. States have lots of ways to subvert it.

Mark said he had not seen much emphasis on HOSS - Hardened Onsite Storage except for Rep. Markey's bills requiring expedited transfer from pools to casks asap, not really hardened.

Holt said a Committee like this one would have a lot of potential that made sense growing out of the state's legislative activity that the VT delegation pushed regarding NRC. He said there has been a lot of effort to get stranded communities together. He thought our findings would be of interest to a willing group of legislators, the Admin and DOE and the Committee could participate in meetings, signing letters and getting involved in hearings as they move forward. In Congress Committee chairs set the agenda and can name witnesses. Any serious group doing serious, comment on lawsuits, NRC regulatory actions, etc are needed for public comment.

He mentioned Holtec getting support from the Oyster Creek community -- that's Holtec's route for making their CISF happen. They take over ownership of a plant and liability for spent fuel, they become the standard contract party, they take their own fuel from own plant to another plant (apparently some transfers of this type, from one company's maxed-out spent fuel pool to another facility it owns with more room, have occurred). Then the company sues DOE for the costs and keep getting reimbursed sidestepping the existing laws completely. If the community Holtec is taking the waste from is supportive, it would be helpful to the company.

He explained that under the 1982 NWA DOE takes title to the waste once it leaves the plant site, and DOE is subject to NRC security requirements and routing requirements. DOT is responsible for transport and DOE is responsible for security along the way. DOE would be contracting for all that anyway. In the private companies' plan, the DOE never takes title to the waste. The companies could store it forever and keep getting payment from the judgment fund, essentially performing interim storage without any plan for a permanent repository. The NWA 'linkage' only affects the monitored, retrievable storage (MRS) authorized by the act, so potentially a private company could do it outside the act.

He fielded questions about whether a private company could transport waste under such a mechanism. The National Transportation Stakeholder Forum -- DOE's way of dealing with states on transportation issues and fields local first responder funding requests. Private companies could set something up like that, provide a grant for private transport of SNL. The utilities would put railcars on trains to ship waste to other plants that had room, but there would be a cost and risk to communities along the route. He said these issues may be raised in Congress. He estimated that if a utility was able to ship in such a way that the implementation of a transport

plan would likely take at least 7 years considering all the technical, legal and political issues. There is the constitutional authority to do it, but states have their own rules and ways to fight it off.

June 2021 Meeting: Discussed need for physical meeting space. Discussed a Congressional Letter calling on Marcy Kaptur and Mike Simpson to back a DOE CISF facility. Discussion of town of Vernon position, Maddie agreed to bring it up. Schyler Gould reported on a conversation he had with Scott State - that WCS has a minority position in the Interim Storage Partners effort in TX and that even if it gains a license from NRC would still be a long road.

July 2021 Meeting: First meeting physically in space. We were joined by Dept. of Energy's Erica Bickford who shed much light on the CISF process and developments under the Biden administration.

(LW recapping key points Bickford presentation will cut this down:)

Erica Bickford DOE Program Manager in office of Integrated Waste Management joined us -- BRC worked for 2 years and resulted in 2012 8 primary recommendations 'consent based process' in 2013 DOE issued report on SNF endorsed BRC and laid out framework acknowledging that a **change in law** would be required if - draft legislation was introduced in 2013 and 14. DOE launched in 2015 developed consent based siting initiative around the country feedback summarized, document in 2017 had change of admin and Trump discontinued that initiative and entered a form of limbo. Trump wanted to return to Yucca and also CISF and no support from Congress. Now Biden picking up from 2017, now supported by Congress. Fiscal Year '21 appropriated, DOE to conduct CISF consistent with NWPA and move forward to find to identify a site and use consent based approach, first time in 10 years we got direction for specific facility, clear direction. Currently working on, request for information, look at 2013 and 2017 documents, want feedback, reviewing comments gotten in 2017 -- new consent based website that will serve as public resource, look at various issues and facilities and regulatory questions, widely understood we will need legislation to continue progress. FY 22 budget includes developing a waste mgmt system, regulatory, design concepts, updating data on inventories of SNF, continue efforts for transportation specialty rail cars, sites, engagement with state and travel reps and working groups. Sec. Granholm has endorsed BRC and consent based siting, Dr. Katie Huff moving toward solutions is among top three priorities.

Questions: Marvin: slideshow on development of rail cars -VY has Holtec 100 -- which one of the specialty Atlas rail cars will be required and when will be approved? Assn of American Railroads specifications. We have a number in development - 12 axle rail cars for transport and the 8 axle FORTIS want to move forward on fabrication, which one used will be determined by total loaded weight, in general Atlas designed to carry all 17 cask designs, to envelope all the casks 80 tons to 240 tons. Fortis developed since you pay by weight, lighter loads on Atlas and

might have to add ballast, so this is for smaller packages. Buffer rail car goes between locomotives and cars with SNF, buffer cars, rail escort vehicle designed by US Navy for their program, ATLAS closed to completing testing, BUFFER, FORTIS, completed design and now needs to be tested. Hope to have all the railcars to be approved by 2023 and FORTIS by 2025-26. DOE is also investigating track work, has that been done to VY (Marvin) - proposed private interim facilities are completely outside of DOE connection or control and have done no work with them or their infrastructure. Did site visit VY in 2017 looked at rail spur and line, met with the NE Central Railroad, took down to Palmer MA (CSX Class One rail line that connects with national network) where waste would go before being transferred, have not done a full route clearance but didn't see anything that looked to us to be very problematic to transport out of site.

DOE is a pilot facility so outside current law? DOE efforts are completely independent from private in FY 21 fiscal is that congress approve 'a federal interim storage facility' Congress said MRS (is like CISF, yes in terms of NWPA constraints no, size and linkage to yucca) monitored retrievable storage framework can move forward - MRS has a cap at 500 metric tons, very small amount that can be stored and is not practical - written in 80s - at a minimum MRS cannot proceed until 'yucca mountain' has a 'license to construct' which is challenging since there is no political will at all to do Yucca.

Drawing on WIPP experience, NM approved and had EPA as their regulator cuz NRC had no credibility.

DOE has not gotten direction from Congress to do anything with Yucca, ball is in their court whether want to remove it from law, there were proposals to move forward with both R and D, there is virtually no political will to do anything with it, continues to be on hold, may or may not be indefinitely. Until removed from law is technically out there.

DOE will move forward on its own CISF without permanent repository. We recognize asking a community to be 'interim' is harder so as we develop our national plan need to develop the 'disposal' element, but we can't make any substantive progress until we are authorized to do so by Congress. DOE site would be required to have NRC.

July 15, 2021 Andrews County rejected that opportunity unanimous (guy on phone Tim Cannaway) question remains and has long been the challenge we've had local communities interested but states or counties reject so we are not being specific about what means consent, we are including tribes in **this process since they are sovereign nations, 'whatever is agreed to as level of consent'**.

The company pursuing license thinks there is a way to call the ISFSI they can proceed without any action from Congress, they believe Congress not needed for My statements are from DOE so we need Congress approval. For private facility, they believe they can move forward independently under current storage facility - how do they make money doing it is the question. How can ISF transport waste between private facilities, ISF owns the waste, no title exchange. I can't speculate on how their transport would work. DOE does not own SNF, law says that when DOE at point left facility

boundary it would take title. Private facilities believe they can transfer to another facility, maintaining ownership, so private would be doing as a private system. Moving SNF from one facility to another is not unheard of, moved from pool to pool, could be considered to be a comparable activity albeit at a much larger scale. Approvals would then be Up to DOT and NRC regulations. Would any 'consent' be required for a private effort or can they ignore the state and local county. We have no relationship with ISF or Holtec, private co doing its own thing. DOE economic impact has never looked at hardening onsite storage, intention was always for disposal, no regulation. Likely more expensive to transport fuel twice rather than once, but depends on where transporting from. In nuclear waste system, transport is actually a small part of the cost - 3-10%. \$2 million a day from judgment fund and lawsuits and there's a cost there. Gov taking ownership of fuel and fulfill contracts would reduce that cost.

Define consent, may take a long time. Ball park to get to CISF is 10 years, 2 years construction, 2 years licensing, rest is neg w/ community. Perm Repository ballpark is at least 30 years. We aren't currently working toward finding a repository, but is still the end space and sooner or later we need to move forward on that. We need to be able to tell CISF communities what they are signing up for.

Dept Homeland Security, barge coast guard may be part of transport. Packages used to transport are NRC approved, rail sets regulation, many frameworks. DOE is shipper, or a contractor arrangement. Assn of American Railroad predates the fed railroad administration based on the org's standard. If railcar is approved by Assn of Am Railroads and approved by DOT. DOE funding railcars. Cost of transporting all waste to a CISF? All on order of \$100 billion, and transport 10% -- based on one or two CISF and a repository.

DOE starting to look for CISF facility to see if anyone raises their hand, phased-in adaptive process to engage communities in exchange for some funding to start taking a look at it. Not going out for call for folks to sign-up but seeking input for forward steps.

(and corp liability if there is an accident? Fed gov assumes all risk as per old law)

DOE takes title to SNF and compensates community? Aggregation results in cost efficiency, right now 40 different seeking damages from US gov, if you consolidated you would reduce capitol costs, security, keeping at host facilities would require DOE to be convinced there will be a benefit to taxpayers. Moving to one or two locations would store more effectively. How many communities want to go that route? If there were a lot that wanted to go there. Private corps seeking damages not communities. DOE taking ownership of SNF, then its responsible for managing it.

August 2021: Meeting focused on current Congressional activity with Guests Haley Pero and Thea Wurzberg. Resulted in a Brattleboro Reformer article:

https://www.reformer.com/local-news/staffers-see-little-interest-or-action-on-nuclear-waste-issues/article_6aee6250-043e-11ec-9714-e38d784c3185.html

In the Consolidated Appropriations Act, 2021 (Public Law 116-260; U.S. Congress 2020), DOE was given \$27.5 million appropriated for nuclear waste disposal activities (including funding related to interim storage activities) as well as the \$3.6 million to fund the work of the Nuclear Waste Technical Review Board, representing the most significant appropriation in addressing the nation's spent fuel storage challenge in a decade.

A House Nuclear Waste Caucus has been created but no details have been forthcoming about its goals or meeting schedule. Rep. Welch is not a part of that caucus at this time.

ISSUES/QUESTIONS/POTENTIAL POLICY RECOMMENDATIONS

YUCCA MOUNTAIN

The Committee explored whether NDCAP can support any 'interim' consolidated storage facility with no progress nationally on the 'permanent' geologic depository called for in the Reagan-era 1982 Nuclear Waste Policy Act (NWPA) which initially called for there to be two repositories on either side of the country, but designated only as Yucca Mountain in the 1986 amendment to NWPA absent any consent contemplated. That same law states DOE will have a facility open by Jan. 20, 1998 to receive waste back from host communities, which after 23 years has not happened.

The entire state of Nevada opposes Yucca and has since it was first proposed in 1987. Geologist and former NRC Chair Allison MacFarlane has written in 'Uncertainty Underground' (MIT Press, 2006) about the scientific and technical issues that remain unresolved at Yucca, meaning the problem with Yucca is not just political. A 2004 DC Court of Appeals found Yucca could not comply with the minimum 10,000 year assurance of safety, which begs the question what facility could?

The Nuclear Waste Strategy Coalition (NWSD -- Vermont's PUC and DPS are listed as members as of 9/10/21) backs completion of Yucca mountain's environmental assessment by the NRC and backs CISE. That group was formed in 1993, by MI, MN, FL utility commissions. Executive Director Katrina McMurrian's presentation on history of nuclear waste is shared on NDCAP page. She described the Coalition's pov: "We want to move ahead with licensing of Yucca... We want scientific work of NRC to be completed and gotten to a sound decision to move forward or not, which is up to the NRC." In 2021 it requested that DOE develop and manage an office

devoted to integrated nuclear waste storage, transportation, and disposal, a concept that the BRC in 2021 also supported as a separate cabinet level agency.

It should be noted that if the Yucca Mountain Project proceeds, the current inventory of SNF already exceeds the statutory capacity limit of 70,000 MTHM for the Yucca Mountain repository, implying the need for additional repository capacity at Yucca Mountain or elsewhere to accommodate current and future generated SNF.

NUCLEAR WASTE FUND

A key requirement for DOE to be able to make meaningful progress toward transporting and disposing of SNF and HLW is maintaining a sufficient and reliable source of funding for planning and execution of the nuclear waste management program. The Nuclear Waste Fund was established by the NWPA and was designed to grow through income from an assessment of \$0.001/kWh to be paid by the nuclear utilities for electricity generated by nuclear power. Appropriations from the fund are controlled by Congress.

In 2013, a federal court decision suspended the collection of fees for the Nuclear Waste Fund by DOE “until such a time as either the secretary chooses to comply with the NWPA as it is currently written, or until Congress enacts an alternative waste management plan” (Dolley and Hiruo 2013). Interest continues to add to the fund. In fiscal 2019, interest credited to the fund totaled \$1.7 billion, bringing the fund’s unspent balance to \$40.9 billion.

According to the latest Nuclear Waste Fund Audit Report by the Department of Energy Inspector General (DOE-OIG-21-02) payouts to corporations and quasi-gov owners of SNF will total \$8.6 billion through September 30, 2020 and that the remaining additional liabilities will total \$30.6 billion (“assumes activities on a DOE Facility will begin by FY 23”). These funds are paid out of a permanent appropriations account known as the Judgment Fund outside the appropriations process.

The Nuclear Waste Strategy Coalition, dominated as it is by utilities, is focused heavily on use of those funds. According to its ED: “We want to follow current law. Customers already paid (over \$11 billion) in to get Yucca done and if it passed muster and was opened it should take that waste. The gov. has completely dropped the ball but has customers’ money. Our state members are concerned that, customers are not getting what they already paid for.”

BLUE RIBBON COMMISSION (2012) AND U.S. NUCLEAR WASTE TECHNICAL REVIEW BOARD (2021)

Committee members were assigned to read the Obama administration’s Blue Ribbon Commission 2012 recommendations which re-iterated the long-held decision by the scientific community that a deep geologic repository is the best option for permanent disposal of nuclear

waste and supported a 'pilot' CISF as well as formation of an independent executive agency to manage nuclear waste.

Another recommendation of the BRC and some other Coalitions such as the San Onofre and NWSC is establishment of a new single-purpose organization, ideally as an independent entity outside DOE with the mission of safe management and final disposition of SNF in the United States. An independent agency would ostensibly preserve the personnel and capabilities needed to successfully address the multi-decade SNF management challenges and be stable, properly staffed, securely funded, and insulated from short-term political changes.

The US Nuclear Waste Technical Review Board published in April 2021 'Six Overarching Recommendations for How to Move the Nation's Nuclear Waste Management Program Forward' which focused mainly on how DOE should be taking charge of integrating all the different entities complicating progress, so it appears they advocate for an agency within DOE.

PARAMETERS OF FUTURE VY DEVELOPMENT

The Committee has not dealt with the potential for future development of the VY site but the town of Vernon has been engaging in these explorations and it may be helpful for the Committee to keep apprised of those plans/hopes. The ISFSI occupies two and a half acres of the 143 acre site, but will have a much larger perimeter, at least 100 meters all around, then a radiological dose component of that owner-controlled area. Rail and truck access will also take up a big piece of that exclusion area.

TRANSPORTATION ISSUES

Leshinskie is part of New England including Regional High Level Radioactive Waste Task Force of the Council of State Governments (which feeds into National Transportation Stakeholders Forum planning for radioactive transport since (1987?) and the interstate coordination / complications it entails, planning complicated by having no specific destination or timetable in mind for delivery, only 'someday' and 'someplace.' We did determine that, even if a CISF was opened tomorrow, it would likely take at least an additional 15 years for the SNF to move.

UNDERSTANDING THE DUAL PUBLIC (DOE) / Private (HOLTEC/ORANO-WCS) CISF TRACKS

(Leshinskie researching) We learned from DOE that there are essentially two tracks for developing a CISF site. The original deal between private companies and DOE established that DOE would be responsible for waste privately produced and remove waste and take title to the waste only once it leaves the original site. Private companies now sue DOE and receive compensation from the 'judgement fund'(where do those payments come from?). Not all the companies that have SNF are private. TVA and a number of southern sites are quasi-governmental. What are the issues regarding SNF title transfer from the current owners to other

parties, including the federal government, new public-private partnerships, and/or wholly private entities?

From San Onofre Coalition final Action Report: *“The results of the analysis, from both the Strategic and Conceptual Transportation Plans, point to a clear distinction between pathways that rely on the federal government’s longstanding contractual and statutory obligation to take title to commercial SNF and remove it from plant sites, versus pathways that do not presume a central federal role. Put simply, a federal solution, or at least one that encompasses a significant degree of federal support, offers the surest and most achievable path to relocating the SONGS SNF. All other alternatives create uncertain but potentially large risks and costs and thus are far less likely to meet the test of commercial reasonableness, which encompasses critical considerations of cost, cost recovery, title and liability. The steps outlined in this Plan thus reflect an emphasis on federal action as the key to resolving the core SNF management challenges facing SONGS.”*

FEDERAL COMPENSATION FOR HOST COMMUNITIES

The Committee is studying whether the state should be advocating for compensation/support for local community and the definition of ‘impacted’ or ‘host’ community.

Committee explored the current tax agreement with Northstar that has assured Vernon is receiving the same level of support as when the VY was operating and learned that Northstar is including its payments to the town when it sues for compensation from the Federal Government for not taking the waste away. Companies sue the DOE/Feds for breach of that legal obligation total \$X million annually from the ‘Judgment Fund’ (does that come out of Nuclear Waste Fund or will it in future?)

Committee explored new taxation of ISFSI being promoted by Harrison New York and the Indian Point decommissioning plans.

OTHER HOST COMMUNITY ADVOCACY / ORGANIZING

An early goal of the Committee was to gather information on what other nuclear host communities are doing, and more focus will be paid to that question in the months to come to see if Vermont could benefit from working in coalition.

Southern California Edison, along with the counties of Orange and San Diego, in 2017 announced a new coalition to catalyze action on the critical issue of off-site spent fuel storage and disposal. SCE's [Experts Team](#) is chaired by Tom Isaacs, former director, Department of Energy Office of Nuclear Waste Policy, and includes former Nuclear Regulatory Commission chairman Allison Macfarlane, both of whom have expertise in spent fuel siting and licensing. In March 2021 they produced a framework for relocating the spent nuclear fuel now stored literally

on the oceanfront captured in a [three-volume set of plans](#) which the Committee will analyze. SCE and the towns announced the formation of a stakeholder coalition, Action for Spent Fuel Solutions Now, to build momentum toward commercially reasonable off-site storage or disposal solutions and to urge the federal government to meet its legal obligations. One action they's taken is [to write a letter to](#) DOE Secretary Granholm supporting a consensus-based approach to siting one or more consolidated interim storage (CIS) facilities and permanent repositories.

The committee is also exploring how Lacey Township in Ocean County New Jersey Oyster Creek entered into a decommissioning agreement with Holtec that included the town's political advocacy for Holtec's proposed CISF facility in New Mexico

LACK OF ECONOMIC INFORMATION ON CISF VERSUS ON-SITE STORAGE UNTIL PERMANENT GEOLOGIC FACILITY IS FOUND

The Committee has explored the whether a cost/benefit analysis of CISF plan versus keeping waste in place. Private groups around Indian Point have reportedly been exploring commissioning such a study. Queries to our federal delegation indicate no such federal study has been undertaken but that it is something that could (and possibly should) be requested.

FUTURE TOPICS OF DISCUSSION/SPEAKERS

Deep Isolation?

San Onofre Action Coalition?

Other Yankees -- Wayne Norton?

Since WCS nor Orano will speak to us, what about HOLTEC?

Sarah Hoffman?

Analyze longevity of current ISFSI if remains for 50 years, 100 years - should flooding, 'hardening' storage, double casking be considered?

Update on WIPP - Waste Isolation Pilot Project for defense waste in Carlsbad, New Mexico -- which was closed for a couple of years after human error led to an explosion. This facility was meant to showcase feasibility of deep geologic repository.

Keep analyzing what other countries are doing. We learned that no country has an operating deep geologic repository at this time but that Finland's Onkolo facility, which has been under construction for the last 25 years or more, may officially begin receiving waste soon.

Clarify criteria for the reimbursement of costs from the Nuclear Waste Fund and/or Judgment Fund necessary for any consolidated spent fuel storage. For instance, should the fund allow reimbursement for all aspects of transportation (including indemnification as would be provided were DOE to contract for SNF shipments) and storage costs at alternate site(s).

TOWN OF VERNON STATEMENT

Maddy Arms read a statement she elicited from the town of Vernon at the August 2021 committee meeting:

This statement is the formal position taken by the Town of Vernon Selectboard representing the citizens of the Town:

The Federal Government has not performed its own mandate, to assume ownership and storage of spent nuclear fuel. Thus, the current licensee, NorthStar, will monitor and maintain the Vermont Yankee ISFSI [Independent Spent Fuel Storage Installation] until the Federal Government sites a repository or repositories and starts meeting its obligations.

The Town of Vernon understands and acknowledges the responsibility and the risk of housing the fuel until an approved repository or repositories is selected and the fuel can be transported off site. The Town of Vernon supports a repository site or sites under the following conditions:

1. Approval by the Federal Government, DOE [US Department of Energy], Congress and the NRC [Nuclear Regulatory Commission].
2. Deemed / tested safe by engineering and environmental experts by known and reasonable standards.
3. Received approval and consent from the state, territory, town, or country chosen to be the repository or repositories. This includes one single repository, multiple repositories, or interim storage.

MORE QUESTIONS TO BE EXPLORED:

Central question: Should YUCCA be supported or taken off the table? Is it an enigma that prevents anybody from getting a solution. How much was invested so far? Should the panel ask that a new deep geologic facility be explored before action on an 'interim' site occur?

Explore the possibility of new nuclear reactor on the VY site. A small modular reactor was discussed to be showcased on several old reactor properties.

Should an independent agency, as BRC and others have argued, for integrated waste management be supported and why? What are the problems inherent in such an agency operating within the DOE itself?

Should more nuclear be produced if we have no solution, especially since the court stopped collection of generating tax for the nuclear waste fund? California, how many states?

Should congress do a cost/benefit analysis of interim storage vs. HOSS scenario of onsite management for the next decades?

Nuclear Waste Fund -- would need change in law to allow NWF to be used for interim or other purposes?

DRAFT POSSIBILITIES FOR NDCAP POLICY SUPPORT

(these do not need to be included in the report but these are some examples of actions we may begin formulating for advisory opinion consideration / vote)

Recognize tribal rights and consistent lack of consent on part of state of Nevada since 1989 and call on DOE to abandon Yucca Mountain and begin work on locating a new geologic repository.

Support creation of a new DOE agency or a new independent agency that would restart the siting process and fully integrate a targeted waste management program as recommended by the BRC and others?

Officially, as a state, join the Nuclear Waste Strategy Coalition (work with others supporting Yucca completion and CSIF) or formally withdraw as June Tierney has indicated DPS would.

Call for an Economic Impact Study from the General Accounting Office and/or Congressional Research Service comparing solutions paths.

Call on governor and state to take action at the Council of State governments to call a national convention of affected host communities in 2022 on nuclear waste and use NDCAP funds to participate in expressing strong political will/support for a solution now.

Ask Congress to provide Nuclear Waste Fund (NWF) money to allow HOSS compliant CIS facilities to be built at VY and other closed reactors, and / or restart the collection of monies for the fund (cut off by court in 2013) from ratepayers who are still receiving power from nuclear plants. Fairness dictates charging those customers who are using nuclear energy today rather than putting on the back of future generations.

Call upon Peter Welch to join the new Nuclear Waste Caucus in House and for our federal delegation overall to support whatever actions the Panel deems needed.

Support concept of not wasting funds / time on 'interim' solutions focus all energy on a permanent repository and let a new siting process begin.

Support interim storage for places where spent fuel simply cannot be safely stored, like on the ocean at San Onofre.

Support a viable formula for host community federal compensation while the ISFSI remains at VY.

Ask Congress to provide Nuclear Waste Fund (NWF) money to allow HOSS compliant CIS facilities to be built at VY and other closed reactors, and restart the collection from ratepayers who are still receiving power from nuclear plants. It is a matter of fairness to charge those customers who are using nuclear energy today rather than putting on the back of future generations.

Engaging in an analysis of ISFISI viability over the next 50 years recognizing that not much may be done at the federal level before then which means analyzing the VY ISFSI according to the HOSS principles outlined by the Sierra Club, Union of Concerned Scientists, etc.

Appendix A

Organizations that Have Attended One or More VT NDCAP Federal Nuclear Waste Policy Committee Meetings (through 8/23/2021)

Organization Type

Organization Name

Nuclear Lobby Organizations

Nuclear Energy Institute
Nuclear Public Outreach
Nuclear Waste Strategy Coalition

Anti-Nuclear Organizations

Citizens Awareness Network
New England Coalition
Vermont Yankee Decommissioning Alliance
Promote Andrews (Andrews County, TX)

Out-of-State

Government Agencies

Nuclear Regulatory Commission (Region 1 Office)
US Department of Energy (DOE):
 DOE Headquarters
 Argonne National Laboratory
 Pacific Northwest National Laboratory
New Jersey Department of Environmental Protection

News / Media Outlets

Brattleboro Reformer
Exchange Monitor (an Engineering Periodical)
WAMC Radio (NPR Albany, NY)
WPTZ (Burlington TV 5)
WVNY (Plattsburgh - Burlington TV 22)

